

SLC25A44 siRNA (h): sc-88562

BACKGROUND

SLC25A44 (solute carrier family 25, member 44) is a 314 amino acid multi-pass membrane protein that belongs to the SLC25 family of mitochondrial carrier proteins. SLC25A44 contains three Solcar repeats. SLC25A44 shares 31% identity and 46% similarity to yeast Ggc1, which is essential for mitochondrial genome maintenance and also involved in mitochondrial iron homeostasis. SLC25A44 expression is found in all rat tissues examined, with highest levels in hindbrain, cerebellum, and brain coronal sections containing corpus callosum, fornix, optic chiasm, thalamus, hypothalamus, midbrain, pons and cerebellum. The SLC25A44 gene is conserved in canine, bovine, mouse, rat, zebrafish, fruit fly, mosquito, *C. elegans*, *A. thaliana* and rice, and maps to human chromosome 1q22. The mouse gene has been mapped to chromosome 3 F1. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome.

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CHROMOSOMAL LOCATION

Genetic locus: SLC25A44 (human) mapping to 1q22.

PRODUCT

SLC25A44 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC25A44 shRNA Plasmid (h): sc-88562-SH and SLC25A44 shRNA (h) Lentiviral Particles: sc-88562-V as alternate gene silencing products.

For independent verification of SLC25A44 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-88562A, sc-88562B and sc-88562C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SLC25A44 siRNA (h) is recommended for the inhibition of SLC25A44 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SLC25A44 gene expression knockdown using RT-PCR Primer: SLC25A44 (h)-PR: sc-88562-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.